June 17, 2002

Attn: Ms. Gail Siani
NOAA Damage Assessment and Restoration Center NW
7600 Sand Point Way NE
Seattle, WA 98115-0070

SUBJECT:
HYLEBOS NRDA SETTLEMENT PROPOSAL COMMENTS

Dear Ms Siani:

The attached comments on the Hylebos Waterway Natural Resource Damage Settlement Proposal Report (NRD Report) are provided on behalf of Murray Pacific. It is apparent that the Trustees have put considerable effort into the collection, review, and analysis of the available data and supporting information, have used generally reasonable approaches the analysis, and have attempted to provide a comprehensive settlement proposal.

We have reviewed the NRD Report in some detail, and believe that there are several questions and issues that must be addressed and appropriately resolved before the Trustees can present a formal, final proposal to the PRPs and specifically to Murray Pacific. The nature of our comments can be summarized as follows:

- As a small party having a small number of allocated DSAYs, we are most interested in settling our NRDA liability through a cash out option.

- We believe that the total number of DSAYs for the Hylebos system and specifically for the Murray Pacific site for which the Trustees seek recovery have been overestimated due to a number problems with the supporting data and technical analysis which combine to result in more damages than can be justified.

- The Trustees have not convincingly and conclusively demonstrated a causal link between the allocated DSAYs and the Murray Pacific site.

- Assigning damages based on concentrations of constituents in sediments that are below the cleanup levels determined by other agencies with appropriate authority to establish these levels is not reasonable and not supportable.

Thank you for the opportunity to review and comment on the NRD Report. We look forward to your response.

Sincerely yours,
Floyd Snider McCarthy, Inc.

John E. Leder
Senior Project Manager

Encl.: Comments on Hylebos NRD Settlement Proposal
Copies:

Comments on Hylebos Waterway NRD Settlement Proposal

1.0 GENERAL

- The Trustees should entertain cash settlements for PRPs with de minimis DSAY allocations (<10 DSAY) and provide guidelines for such settlement options. It is not practical on several levels for a PRP with de minimis NRD liability to design and implement a restoration project or to partner with other small liability parties to do so.
- We agree conceptually with the fact-based methodology used to allocate responsibility for most contaminants (evidence of a pathway, evidence of an activity), however, we believe the "mass-loading approach" used for assigning PCB and PAH responsibility is flawed. For example, the Murray Pacific site is assessed a major portion of its NRD liability due to PAHs linked to a Site Activity Report noting the removal of a diesel UST and detection of diesel-contaminated soils. This assessment of NRD liability is based on a suite of PAHs that are not characteristic of diesel fuel, while sites across the waterway up stream have been demonstrated to be major contributors of the PAHs in question.
- The Trustees have indicated that one of the Potentially Responsible Parties (PRPs) has property available on which it has offered to build a restoration project that is larger than needed to settle its own allocated share of liability. Further, the Trustees have said that they would be willing to let other PRPs satisfy their allocated share of liability by buying "shares" in this project. We believe that there may be significant technical limitations associated with the property being proposed for this project, and we would like to be assured that property being offered is appropriate and technically viable for use in a settlement restoration project. As part of any proposal, we request that the Trustees must:
- Identify the offering party and the specific property or properties proposed for the restoration project,
- Identify the technical problems and limitations to the use of this property for a restoration project,
- Provide an evaluation of the appropriateness of the property being offered, relative to: the feasibility, potential alternatives, time required, and potential cost of property cleanup; and an estimate of the cost and time required for successful restoration of this property, and
- Provide adequate protections from future liability (i.e., covenant not to sue).
- Please explain DSAY calculation for sites where cleanup activities were completed several years ago and for which cleanup levels were below injury threshold levels. It is inappropriate to attribute and assign injury to a site based only on data from neighboring sites or locations from samples taken subsequent to cleanup at the site in question.

- Calculation and assignment of DSAYs to three significant figures implies an inappropriate and unjustifiable level of precision to the Hylebos NRDA process. This level of precision cannot be supported in general by the HEA process and, more specifically, by the uncertainties in the data, the underlying science, and the language of the report.

2.0 TECHNICAL

2.1 Appendix D: Defining Injuries to Natural Resources in the Hylebos Waterway

- The discussion in this appendix relies in part on reference to publications that are "in prep" or "in press", and that therefore are not available to the parties for evaluation as to their technical relevancy and application to this settlement proposal. This is inappropriate and unacceptable in a case with this level of potential liability to the PRPs. It precludes any complete response. The Trustees must make these documents available for PRP review and comment before developing a final settlement proposal.
- We note that SMS and NMFS scientists use different PAHs in studies resulting in calculated impact thresholds. While Table 7, page 13 lists the16 PAHs purportedly used to represent Total PAHS in NWFSC studies of PAH effects on English sole, this table is in fact a list of the 16 EPA Priority Pollutant PAHs. This is incorrect. These are not the PAHs NMFS scientists used to calculate the English sole effect number. In the NMFS analyses, Johnson (2000) used a different suite of 18 PAHs that differs significantly from the EPA priority list in both low and high-molecular weight PAHs. This results in not only an "apples to oranges" comparison with other criteria such as SMS (because even the NOAA/NMFS breakdown of low molecular weight PAHs and high molecular weight PAHs does not agree with the SMS list). This also creates difficulties in comparing data sets, which is discussed further in the Addendum to Appendix D section below. Finally, this more extensive PAH list (18 versus 16) could certainly have significant ramifications at lower concentrations, such as the 1 ppm English sole "Fish Sublethal Effect 1" concentration used in the analyses.
- There are numerous issues with the English sole "Fish Sublethal Effect" criteria. Given that the numbers were calculated via hockey stick regression from the National Benthic Survey Program (NBSP) environmental dataset, what evidence is there that tumors and other sublethal effects observed are due to PAHs versus other contaminants present in these sediments? In almost all, if not all, cases, PAHs measured at individual data points co-occur with other contaminants such as PCBs, as the NBSP sampling focused on contaminated embayments. Synergistic effects thus are ignored, and effects attributed solely to measured PAHs. This approach is not necessarily supported by other NMFS studies, such as Myers et al (1998) that identified PCBs as a risk factor for neoplasms in sole. Thus, this proposed settlement approach potentially over-attributes effects to PAHs and downplays

synergistic effects that may be required for the development of certain sublethal effects.

- Using liver lesion development, particularly in a sensitive species such as English sole, as some evidence of population-level impairment or even individual fish impairment is not appropriate. Johnson and Landahl (1994) examined the question of lesion relationship to population level effects in their study of estimated annual mortality rates from heavily and minimally contaminated sites in Puget Sound, and in sole with and without selected hepatic lesions, including neoplasms. In this examination of a large data set comprising many field-sampling events, mortality rates in sole from heavily contaminated sites or in sole with toxicopathic liver lesions were not significantly higher than those for English sole from Puget Sound as a whole. Maximum ages and percentages of fish 15 years of age or older were determined for English sole with and without hepatic lesions and from different embayments. The relationship between maximum age and percentage of older fish collected and levels of PAHs and PCBs in sediments was examined. The maximum age of fish collected was similar for animals with and without lesions. There was no evidence of increased age-related mortality in fish with lesions or residing at contaminated sites. In fact, the age of sole and the percentage of animals greater than 15 years of age tended to be correlated with elevated concentrations of PAHs and PCBs in sediment. This study found no detectable effect of pollution on survival of English sole in Puget Sound, at least for animals greater than or equal to 3 years of age. And in fact, maximum age and percentage of very old fish actually were positively correlated with increasing sediment concentration. Contaminant-related liver disease was not associated with increased mortality of English sole, or with an absence of fish of older age classes. Paradoxically, instantaneous mortality and annual survival rates actually appear to be higher in fish with neoplasms than in fish without lesions, and neoplasms are even suggested to be protective for acute effects of toxicants. Therefore, lesions are not contributing to mortality in a way that is significant compared to other sources of mortality (such as fishing pressure, predation, and fluctuations in food supply).
- Service losses attributions appear arbitrary. For instance, PAHs are given a 20% service loss above the 1 ppm threshold, yet other compounds are given 5% when exceeding their lowest threshold. This approach is not substantiated, but rather seems to be based on how the Trustees subjectively view individual compounds without significant justification for this viewpoint. For instance, in the case of PAHs, the higher service loss attribution is justified by more of the community being affected by PAHs, but this logic seems specious. PAHs are significantly metabolized by fish and even some invertebrates, and are not subject to biomagnification like compounds such as DDT and PCBs.
- In the case of PCBs, the lowest threshold value used by the Trustees is a Microtox AET, based on a microbial response. This is the most unreliable bioassay and furthest removed from fish or invertebrate effects. Furthermore, the next lowest criterion, the Chinook SEC1, is not explained. A similar salmon SEC was developed for the Duwamish using a Duwamish-specific BSAF calculated with Duwamish fish (Meador 2000). Given the quoted average Hylebos total organic carbon concentration of 2.3%; it would appear that the Trustees used the lookup table in

Meador (2000) to calculate 173 ppb as the Chinook SEC1. If so, this is completely inappropriate. Meador (2000) used Duwamish site-specific values to derive thresholds. It is thus NOT applicable to the Hylebos or any other site but the Duwamish.

- For tributyltin, the Trustees use 138 ppb as the NMFS threshold resulting in a 5% service loss. This criterion is very low, and much further below any available criteria such as the Puget Sound Dredge Disposal Authority (PSDDA) TBT screening values. TBT can exist and is measured in different ionic forms, depending on the analytical method used (such as TBT as tin atom, etc.). Concentrations of these different forms must be converted algebraically to ensure appropriate conversion (by factors such as 2.4 etc.) (Michelson et al 1996). However, in the derivation and presentation of this value, Meador et al (2000) was not clear about what form of TBT was analyzed, the literature that was reviewed in part to derive this value, or to what ionic form the criterion refers. This causes serious concern about how accurate this number is, as well as how the sediment chemistry values were compared to this number to derive TBT "footprints".

2.2 Addendum to Appendix D: Sediment chemistry data preparation

- When HCC and Trustee paired results were compared, the Trustee results were higher 80% of the time. Instead of averaging or in some way achieving a median between these values, the Trustees developed weighting factors to elevate the HCC data. Little justification was given for this approach, other than the Trustee lab "...expended more effort extracting and preparing samples." However, without a head-to-head comparison of lab standard operating procedures and methods used, there is no additional justification presented for this assessment (and SOPs would be specific about exactly these issues, such as extraction time). Furthermore, while the HCC labs (under CERCLA) would be bound to use largely EPA-accepted methods, the Trustee lab is not under the same level of scrutiny or requirement for standard methods. Automatically assuming the Trustee lab results are superior seems unjustifiable.
- In the Trustee's presentation of the HEA model, they indicated that when calculating sediment chemistry concentrations a value of ½ of the detection limit was used in those instances when chemicals were not detected above the method detection limit. Considering their use of very low threshold concentrations for PCBs and PAHs, using ½ of the detection limit for non-detects could have severe consequences for PRPs. There are a number of statistical methods for treating truncated data. The Trustees (or the PRPs) may want to consider reexamining the chemical data using such a statistical method.
- Ironically, PAH and PCB concentrations (which have the lowest NMFS-derived thresholds) received the highest HCC to Trustee data "correction" factor, and were not subjected to the same SYSTAT statistical analyses to derive this "correction factor" as were other compounds. This would serve to further unreasonably magnify the damages attributed to PAHs and PCBs.

- It was not clear how the different PAHs were summed – the NMFS threshold PAH list should be different than the EPA priority pollutant PAH "standard" summing, yet this was not apparent. Did the HCC data set contain the expanded and differing NMFS list of 18 PAHs so that head-to-head comparisons could be made? Were SMS comparisons made using a different list?
- The footprint mapping was conducted using the entire data set. Undetected compounds were assigned a value of ½ the detection limit. Chemical concentrations were interpolated using a simple inverse distance weighting (IDW) procedure on log transformed point data, apparently because of limitations in the program used by the Trustees. IDW uses the distance to the nearest neighbors and an inverse power function to calculate chemical concentrations in the area between each sampling station. More advanced geostatistical contouring methods, such as kriging, are available and are more appropriate for this kind of modeling.

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